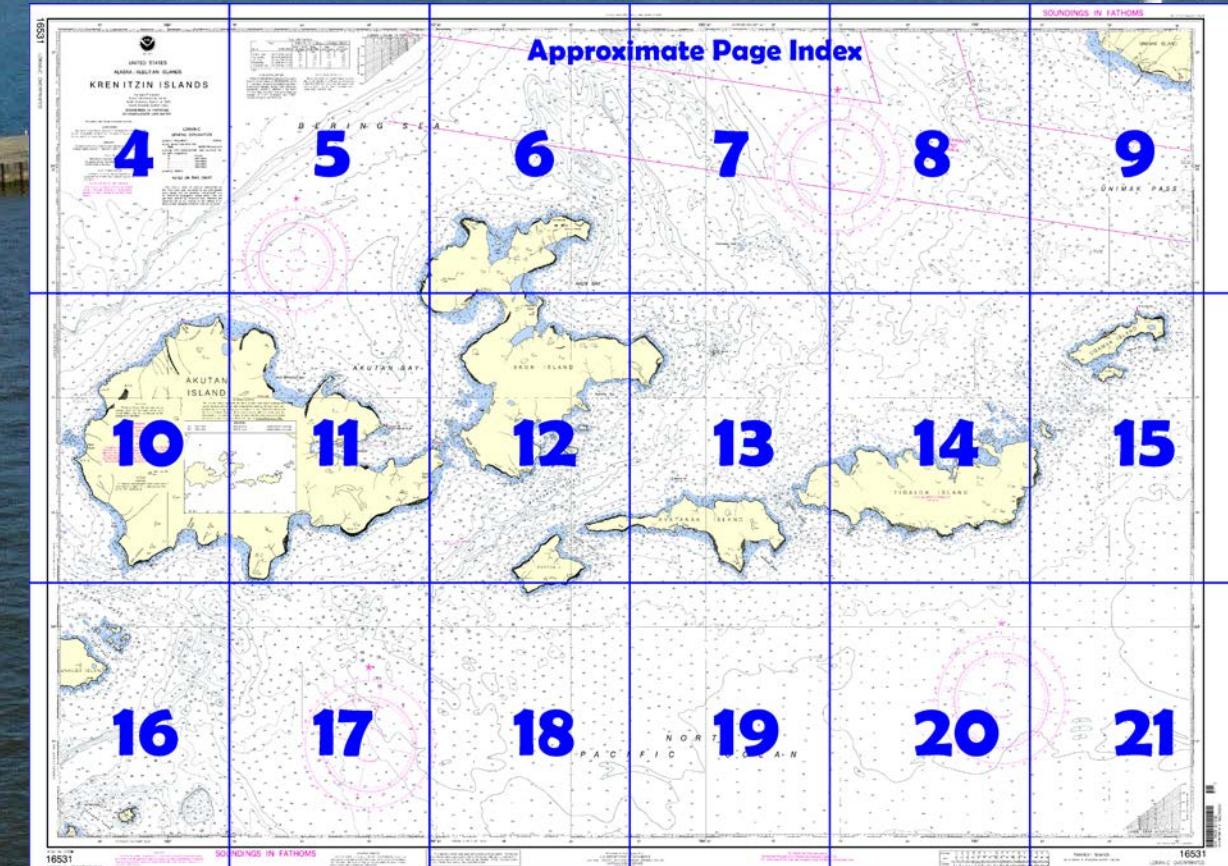


# BookletChart™

**Krenitzin Islands**  
NOAA Chart 16531



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the**  
**National Oceanic and Atmospheric Administration**  
**National Ocean Service**  
**Office of Coast Survey**  
**[www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov)**  
**888-990-NOAA**

### What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

### What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

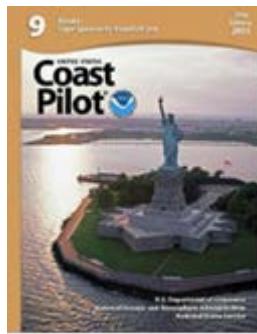
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

### Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at [http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=165\\_31](http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=165_31).



#### (Selected Excerpts from Coast Pilot)

**Akutan Island**, largest of the Krenitzin Group, is about 9 miles NE from Unalaska Island and is separated from the latter by Akutan and Unalga Passes.

The shore of Akutan Island bordering on Akutan Bay and Akun Strait is described in connection with those bodies of water.

**Akutan Peak**, 4,244 feet high, rises about 600 feet on the S rim of a crater, about 1.2 miles in diameter, to form a sharp summit. It is the highest peak between Unimak and

Unalaska Islands.

**North Head**, the N end of Akutan Island, is a high bold cliff, with a large, deep grassy valley in the otherwise high shore on its E side. About 2

miles SW of the cape, a narrow, grassy valley separates the high ridge behind North Head from another high ridge; the W side of the valley is a bluff. **North Head Light** (54°13'16"N., 165°58'47"W.), 60 feet (18.3 m) above the water, is shown from a pole with a red and white diamond-shaped daymark on the point 1.5 miles W of the head.

**Open Bight** is an indentation just E of North Head. No depths greater than 10 fathoms are found in the bight. It is exposed to N swell from the Bering Sea and is not recommended as an anchorage.

A rock awash is about 250 yards off the rounded point just E of Open Bight; a covered rock is inshore from the rock awash.

**Lava Point**, 6 miles SW of North Head, is a fairly flat lava bed varying in elevation from 150 feet along the shore to 300 feet at the base of the hill back of it. The cliffs all around the point are nearly vertical except in places where they are broken off. Numerous tunnels are under the cliffs. The NW face of the hill back of the point is concave and very steep. At the end of Lava Point is a flat rock having the same height as the point and slightly detached from it. In foggy weather low points will sometimes be seen below the fog, and the lava flow terminating in Lava Point often enables the navigator to identify this point. Due to the similarity of the headlands along these islands, this area is one where the navigator has unusual difficulty in identifying landmarks.

**Lava Bight**, just S of Lava Point, provides temporary anchorage in S and E weather. On the S shore of the bight are several waterfalls, including a large one to the E of a group of small ones. The anchorage is in 12 to 15 fathoms, sandy bottom, 0.5 mile from shore, with the large waterfall bearing **160°**.

A large circular reef is off the W coast of Akutan Island between Lava Bight and Reef Point; the outer edge of the reef is about 0.9 mile from the shore. The reef is marked by heavy kelp and is studded with numerous rocks which uncover 3 feet. The W part of North Head open at Lava Point is a good range to clear this reef in passing to the N of it. Between the reef and the shore is a passage which has a least depth of 2½ fathoms and is clear of kelp; small boats use the passage to avoid the disturbed water outside.

**Reef Bight**, on the S side of the reef, is not recommended for anchorage because of poor holding ground.

**Reef Point**, the W extremity of Akutan Island, is steep and rocky and reaches a height of 500 feet. A low rock 150 yards off the point has the appearance of a stranded freighter when seen from the N or S.

**Currents.**—Flood currents with an estimated velocity of 2 knots set along the W shore of Akutan Island as far N as Reef Point. Near Lava Point an ebb current of 1 knot has been observed. Off North Head, currents are weak. A N wind blowing against a flood current produces tide rips as far N as Lava Point.

The S shore of Akutan Island between Green Bight and Sarana Bay is a steep rocky bluff with numerous boulders that extend about 200 yards offshore. A rectangular rock, 75 feet high, is 225 yards offshore, about 1 mile SW from the S end of Green Bight. Numerous waterfalls are visible along this shore in rainy weather.

**U.S. Coast Guard Rescue Coordination Center**  
**24 hour Regional Contact for Emergencies**

RCC Juneau

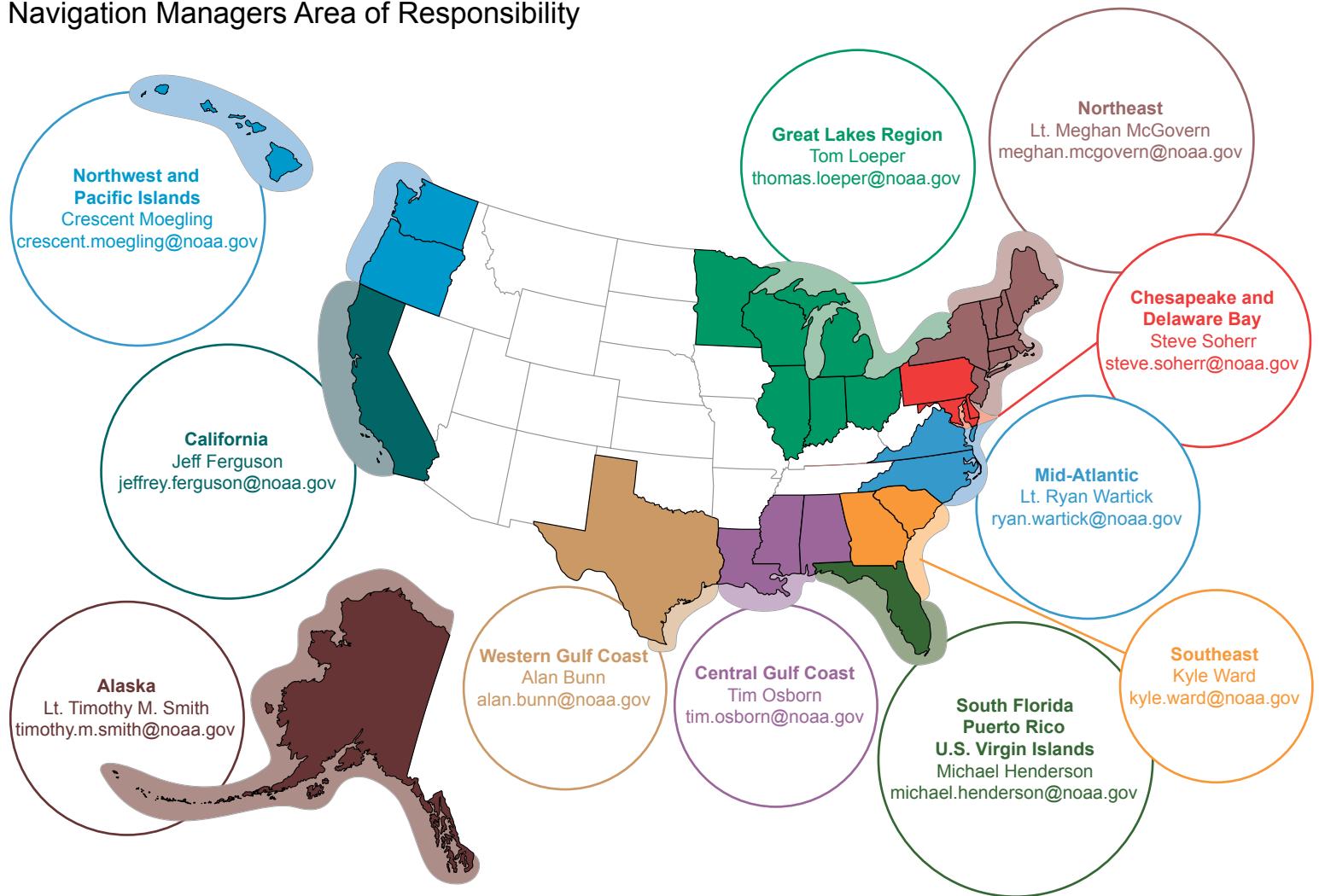
Commander

17th CG District

(907) 463-2000

Juneau, Alaska

# Navigation Managers Area of Responsibility



**NOAA's navigation managers** serve as ambassadors to the maritime community.

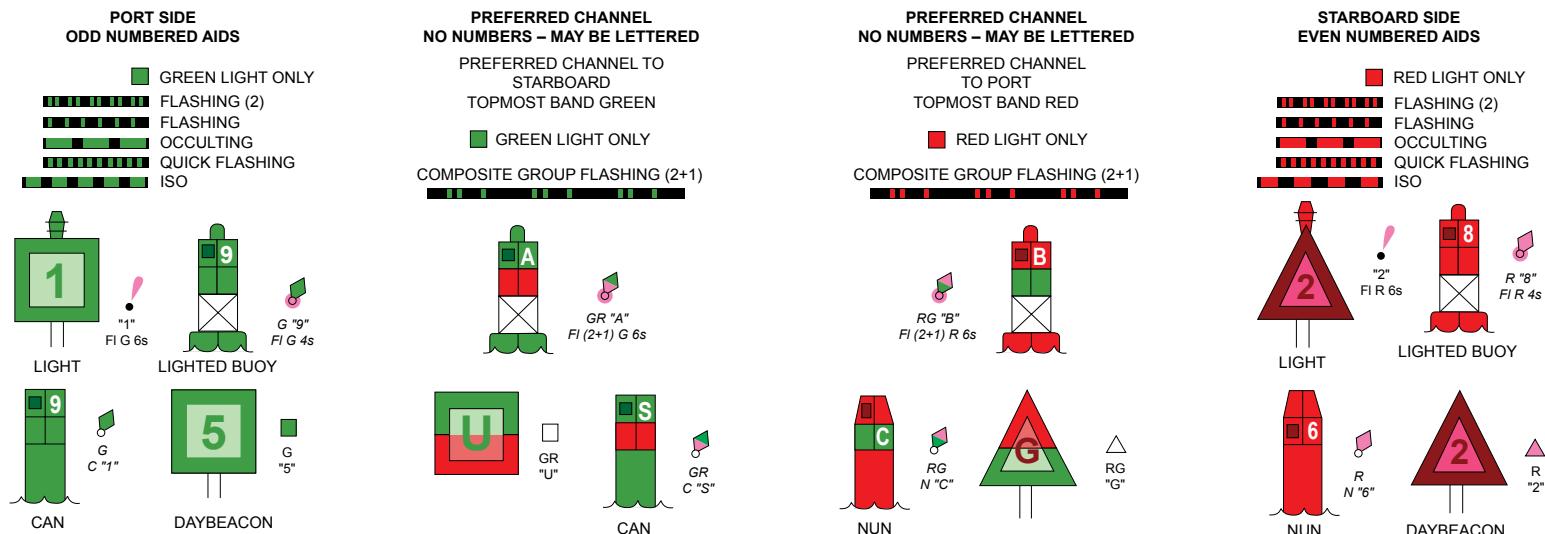
They help identify navigational challenges facing professional and recreational mariners, and provide NOAA resources and information for safe navigation. For additional information, please visit [nauticalcharts.noaa.gov/service/navmanagers](http://nauticalcharts.noaa.gov/service/navmanagers)

To make suggestions or ask questions online, go to [nauticalcharts.noaa.gov/inquiry](http://nauticalcharts.noaa.gov/inquiry).

To report a chart discrepancy, please use [ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx](http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx).

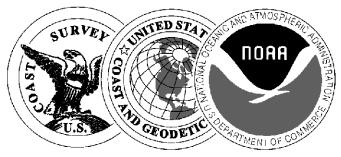
## Lateral System As Seen Entering From Seaward

on navigable waters except Western Rivers



For more information on aids to navigation, including those on Western Rivers, please consult the latest USCG Light List for your area. These volumes are available online at <http://www.navcen.uscg.gov>

05' 166° 55' 50'



## ALASKA - ALEUTIAN ISLANDS

## KRENITZIN ISLANDS

Mercator Projection  
Scale 1:80,000 at Lat. 54°08'  
North American Datum of 1983  
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS  
AT MEAN LOWER LOW WATER

For Symbols and Abbreviations see chart No. 1

Additional information can be obtained at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov).

## AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

## HEIGHTS

Elevations of rocks and lights are in feet above Mean High Water  
Contour values and summit elevations refer to Mean Sea Level.

## CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

COLREGS, 80-1075 (see note A)  
International Regulations for Preventing Collisions at Sea, 1972.  
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

CAUTION  
UNEXPLODED ORDNANCE

Mariners are cautioned against anchoring, dredging, or trawling within the area of the dashed black lines due to the presence of unexploded ordnance.

## LOCAL MAGNETIC DISTURBANCE

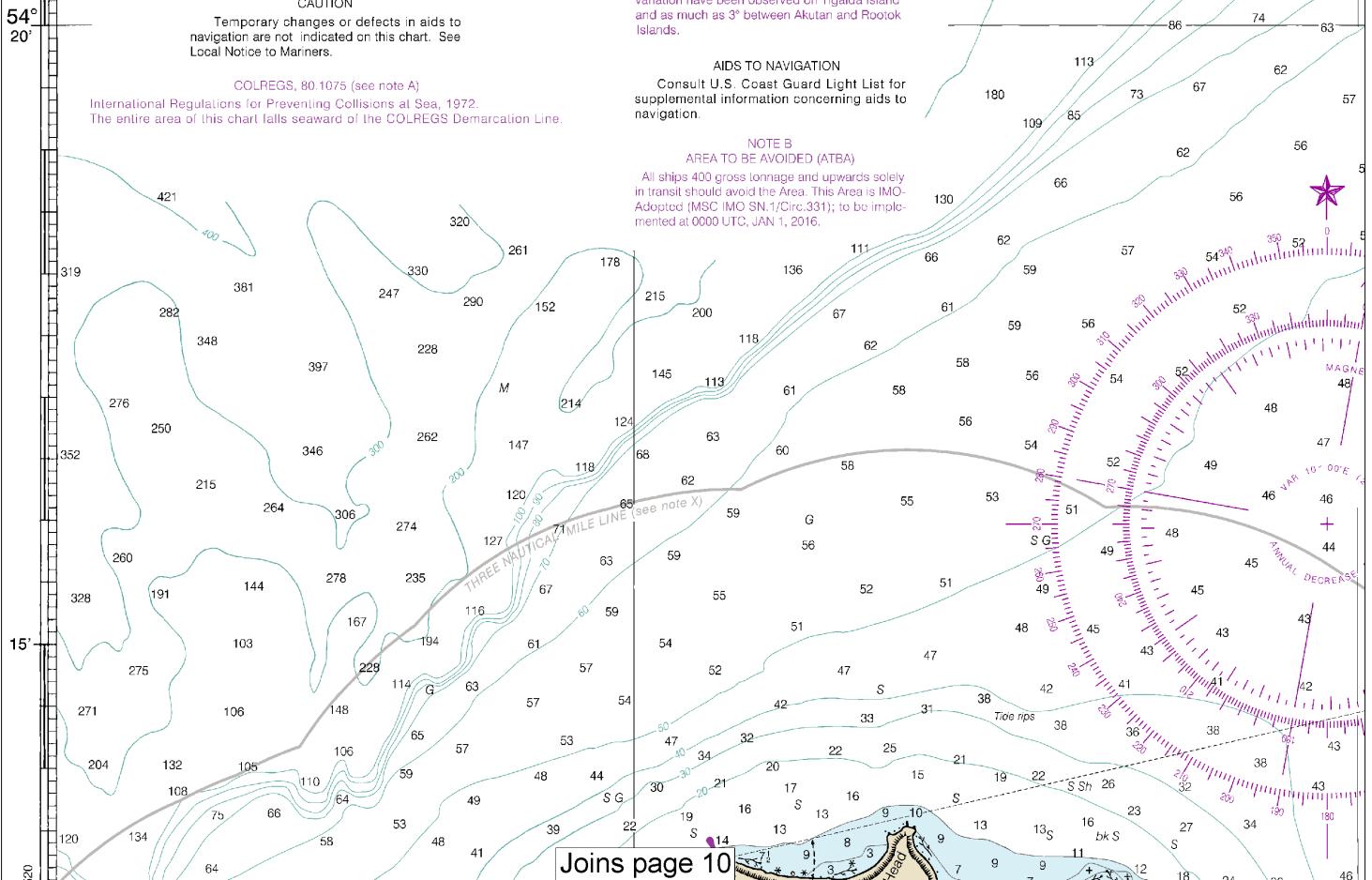
Differences of as much as 5° from the normal variation have been observed on Tsigalda Island and as much as 3° between Akutan and Rootok Islands.

## AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

NOTE B  
AREA TO BE AVOIDED (ATBA)

All ships 400 gross tonnage and upwards solely in transit should avoid the Area. This Area is IMO-Adopted (MSC IMO SN.1/Circ.331); to be implemented at 0000 UTC, JAN 1, 2016.

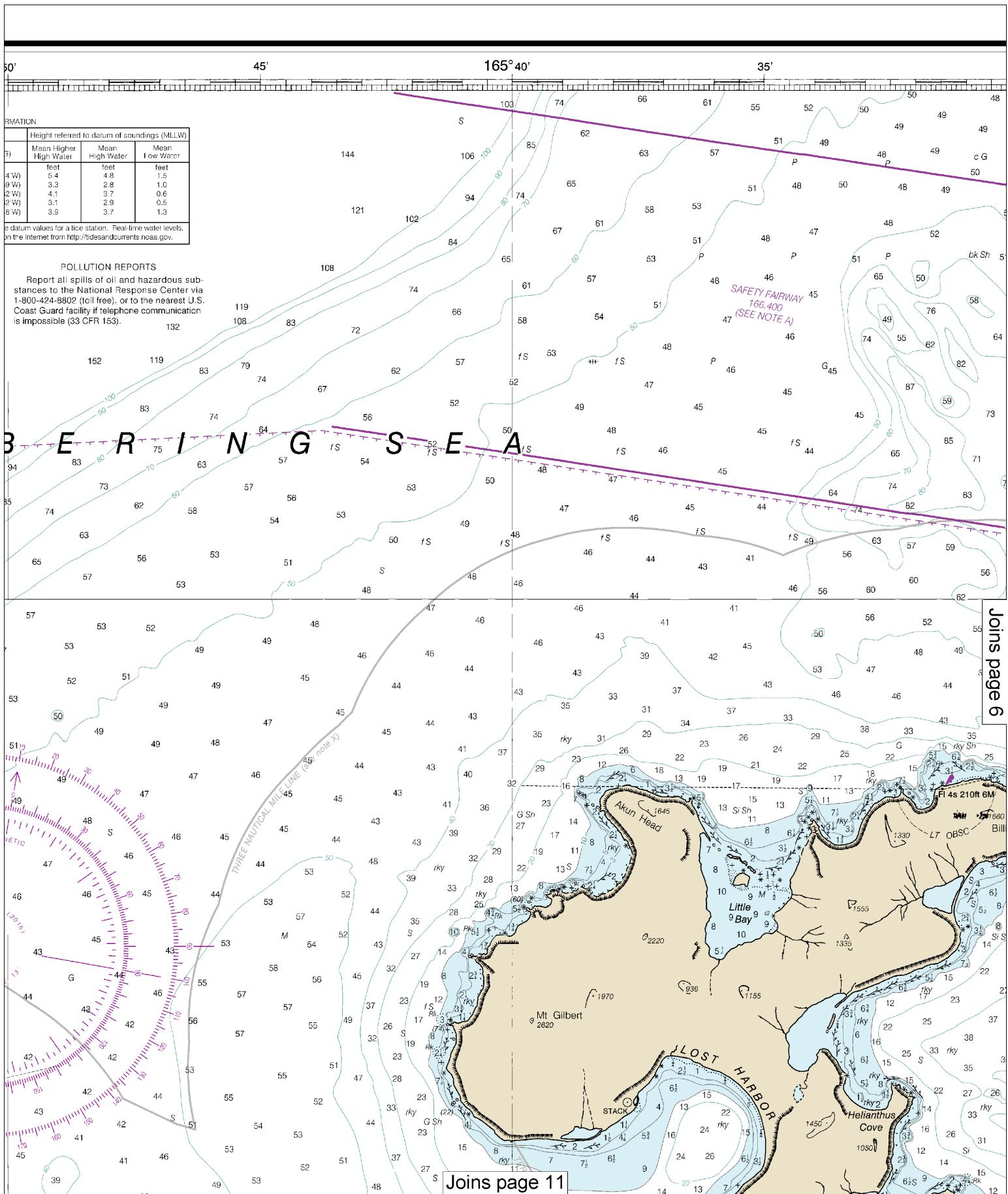


Joins page 10

Printed at reduced scale.

SCALE 1:80,000  
Nautical Miles  
Yards

See Note on page 5.



This BookletChart was reduced to 75% of the original chart scale.  
The new scale is 1:106666. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

45'

$165^{\circ}40'$

35'

30'

This figure is a detailed nautical chart of Akun Bay and the surrounding coastal areas. The chart uses a grid system with latitude and longitude coordinates.

**Key Features and Labels:**

- Geographical Labels:** Akun Head, Billings Head, Little Bay, Mt. Gilbert (2620), Stack, Helianthus Cove, LOST HARBOR, and THREE NAUTICAL MILE LINE (see note X).
- Depth Contours (Isobaths):** Depth values are indicated by numbers along the bottom of the chart, ranging from 10 to 100 fathoms.
- Safety Fairways:** Indicated by purple dashed lines labeled "SAFETY FAIRWAY 166.400 (SEE NOTE A)" and "THREE NAUTICAL MILE LINE (see note X)".
- Shoals and Rocks:** Labeled as "G Sh", "f S", "rky", "Si Sh", "M", and "L".
- Other Labels:** Includes "Joins page 12", "Tide rps", "Tide tops", "Sandwaves", "bk Sh", "G45", "P", "f S", "S", "G", "N", "E", "S", and "A".
- Notes:** Notes A and X provide specific details about the safety fairways and three-nautical-mile limit.

Joins page 12

~~SCALE 1:80,000~~  
Nautical Miles

See Note on page 5.

6

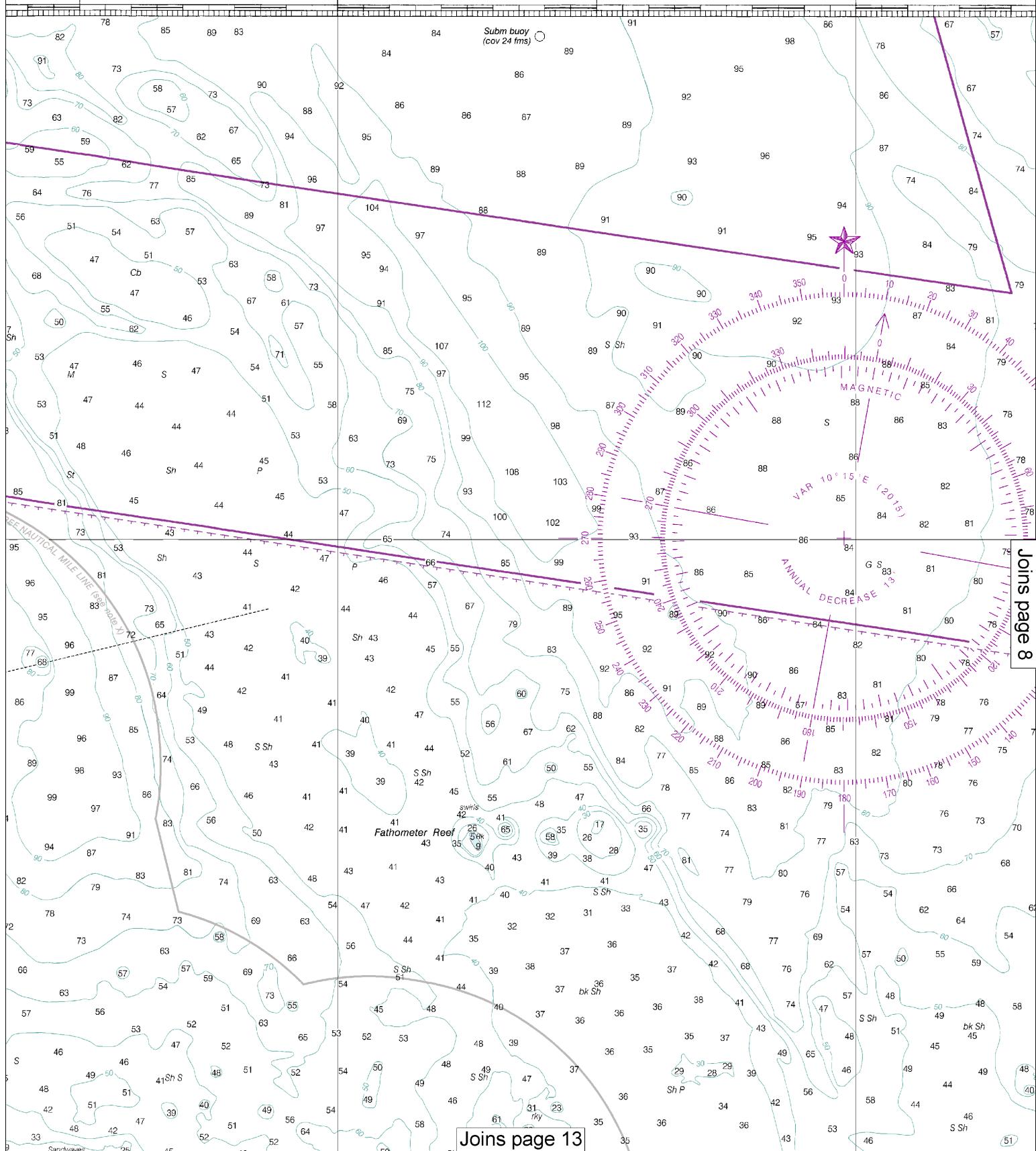
Note: Chart grid lines are aligned with true north.

165° 20'

CONTINUED ON CHART 16011 15'

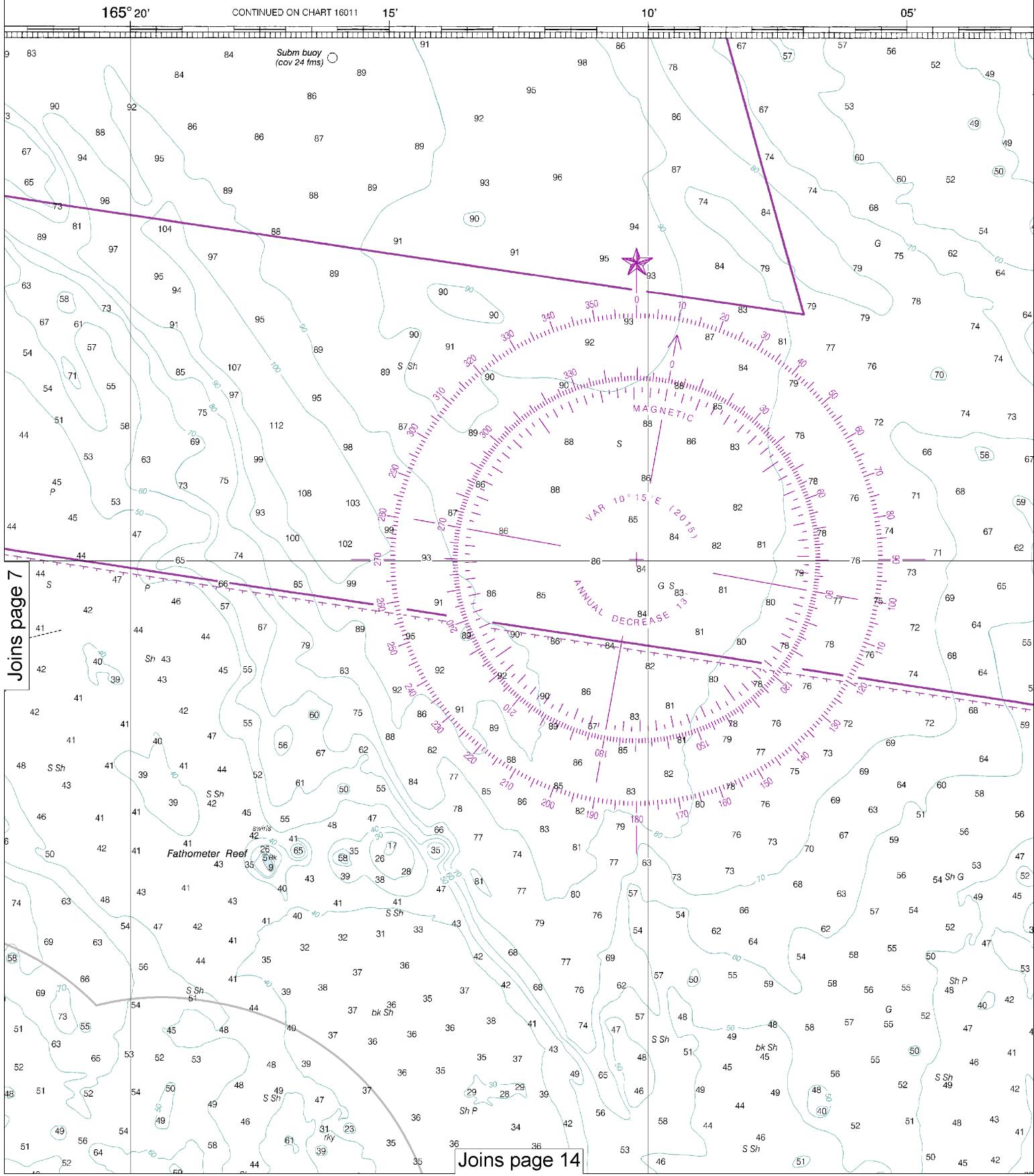
15'

10'



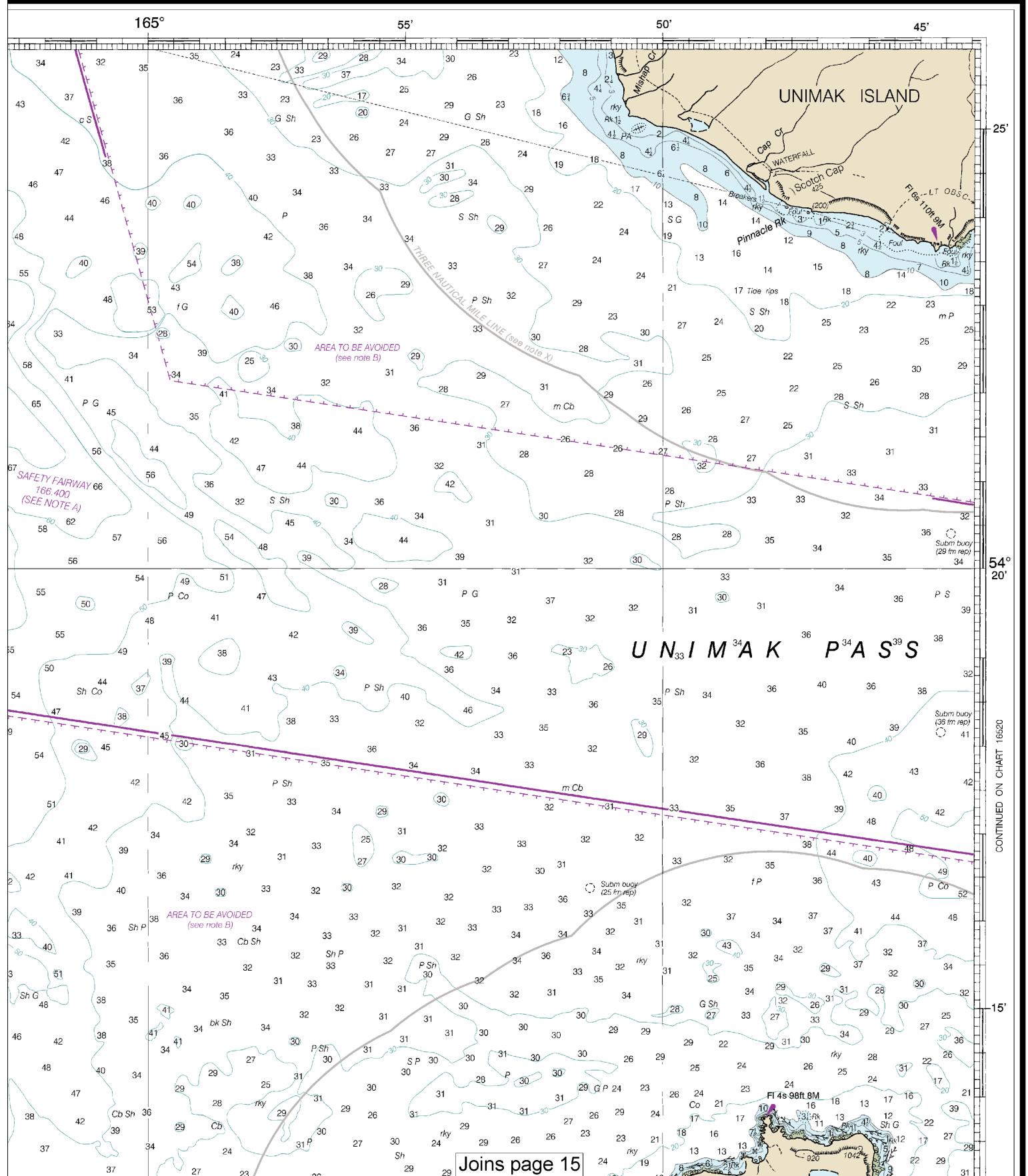
Last Correction: 12/2/2015. Cleared through:  
LNM: 4616 (11/15/2016), NM: 4616 (11/12/2016), CHS: 1016 (10/28/2016)

Joins page 7



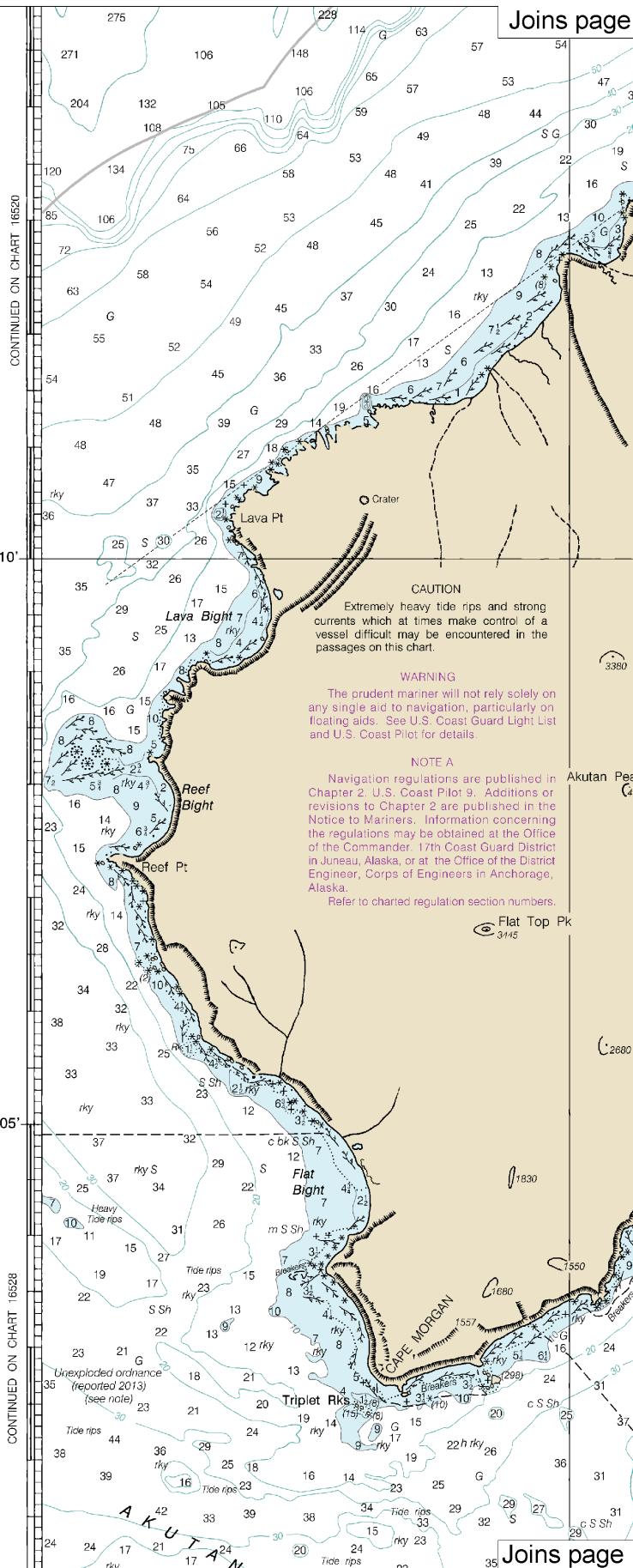
8

# SOUNDINGS IN FATHOMS

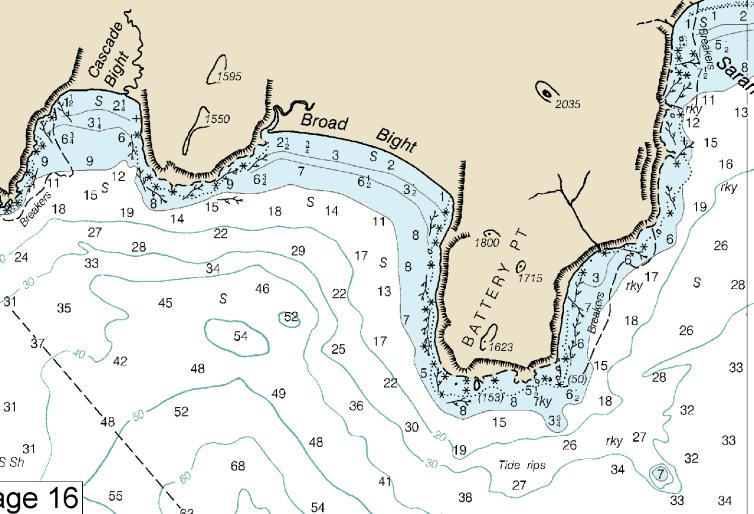
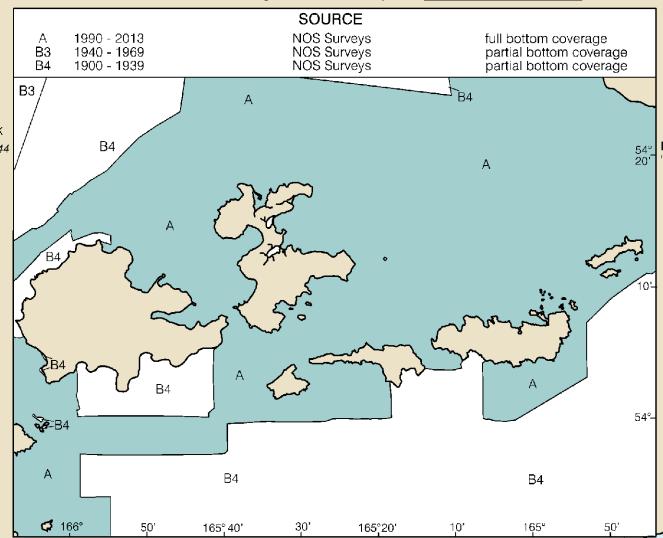
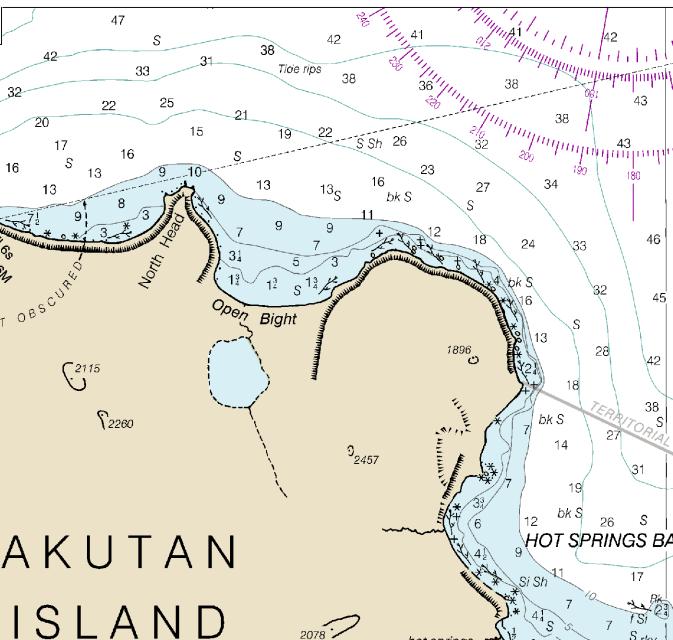


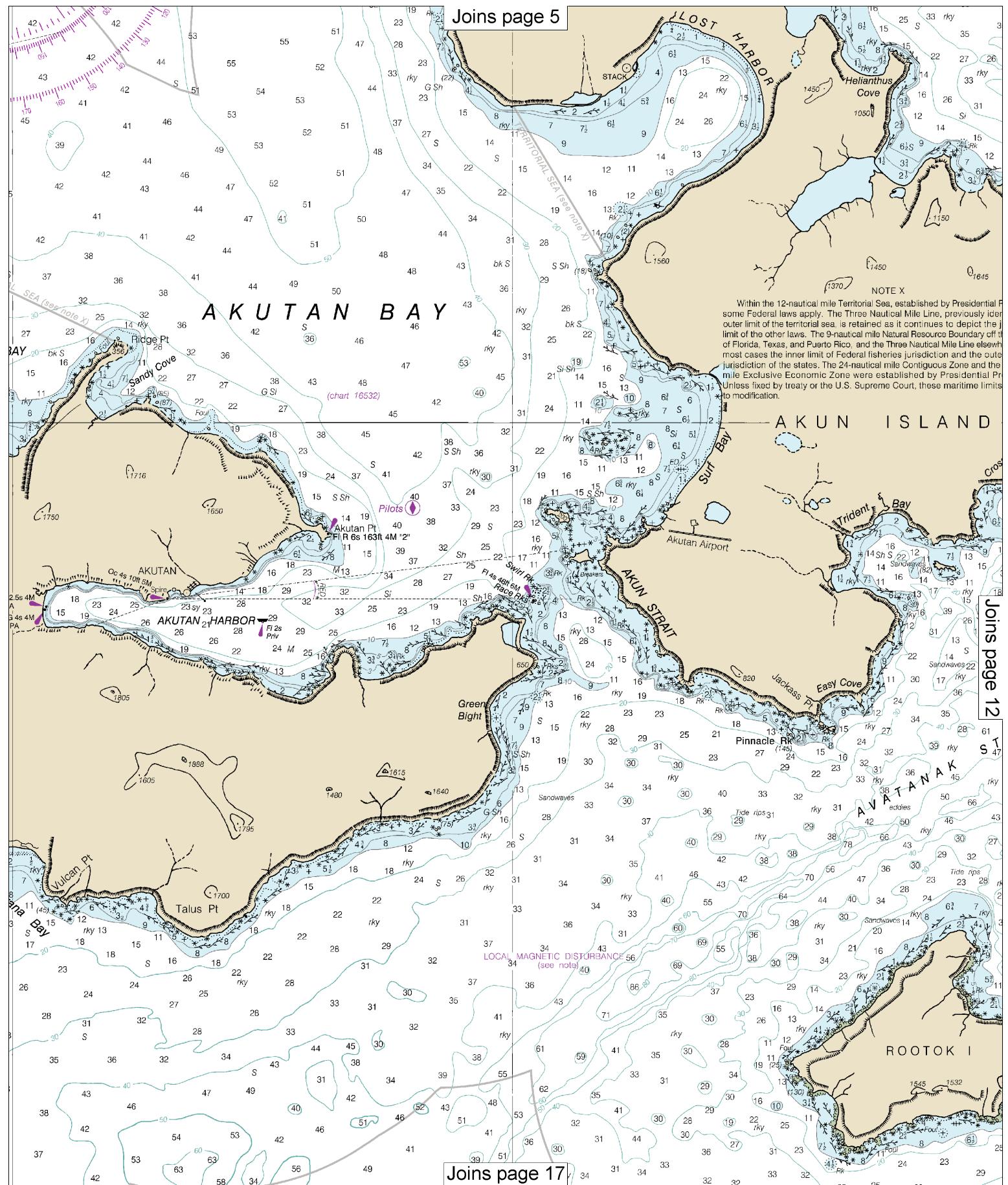
Joins page 4

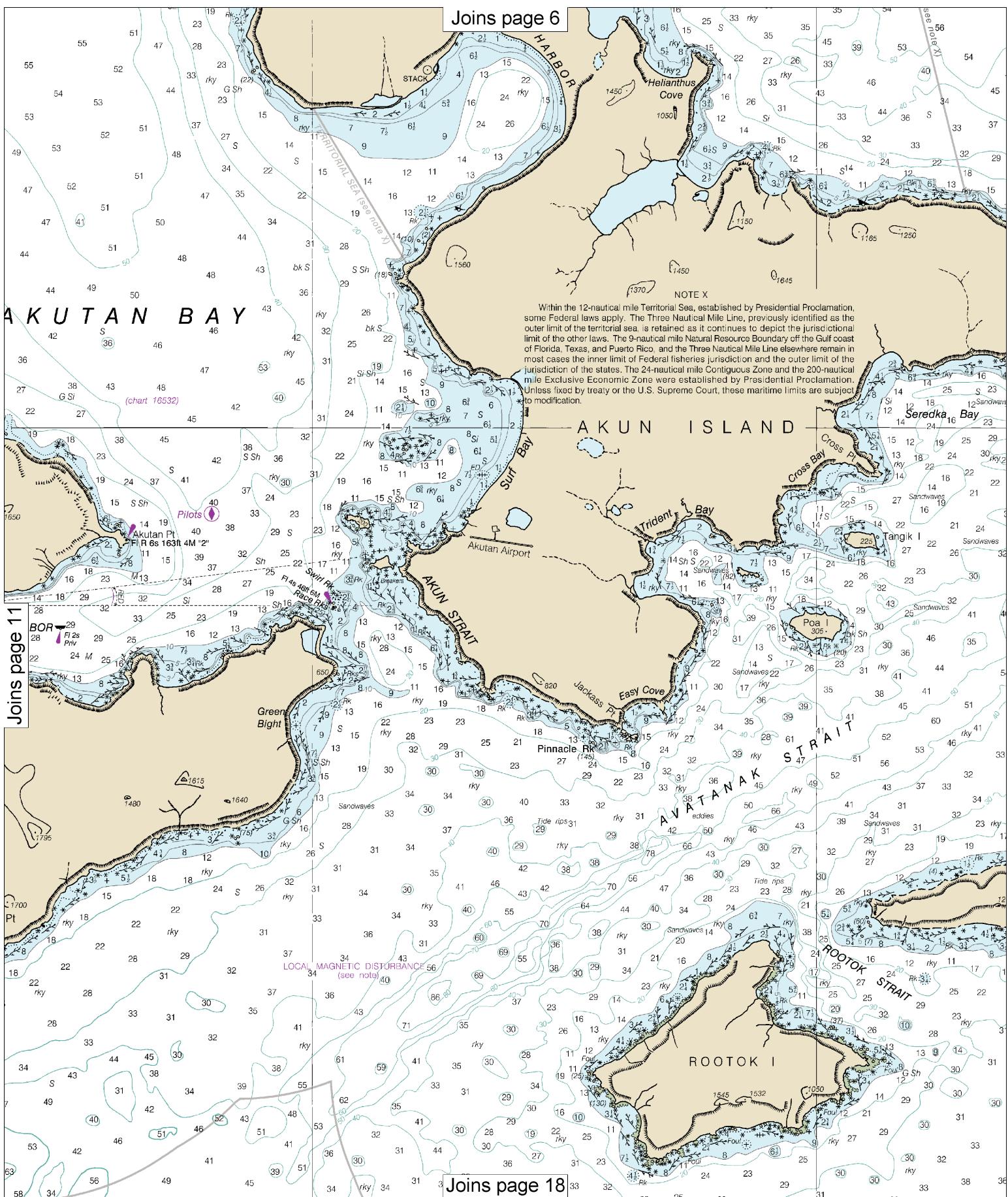
CONTINUED ON CHART 16520



Joins page 16





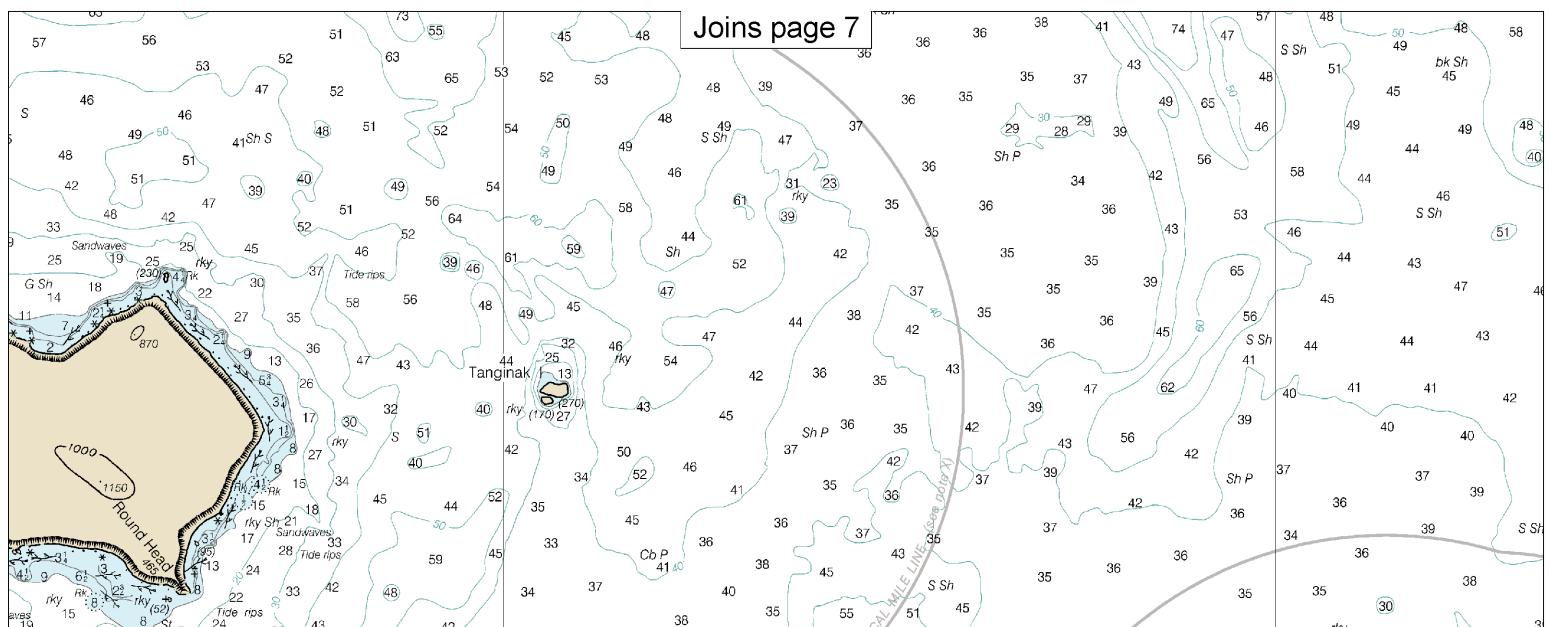


# 12

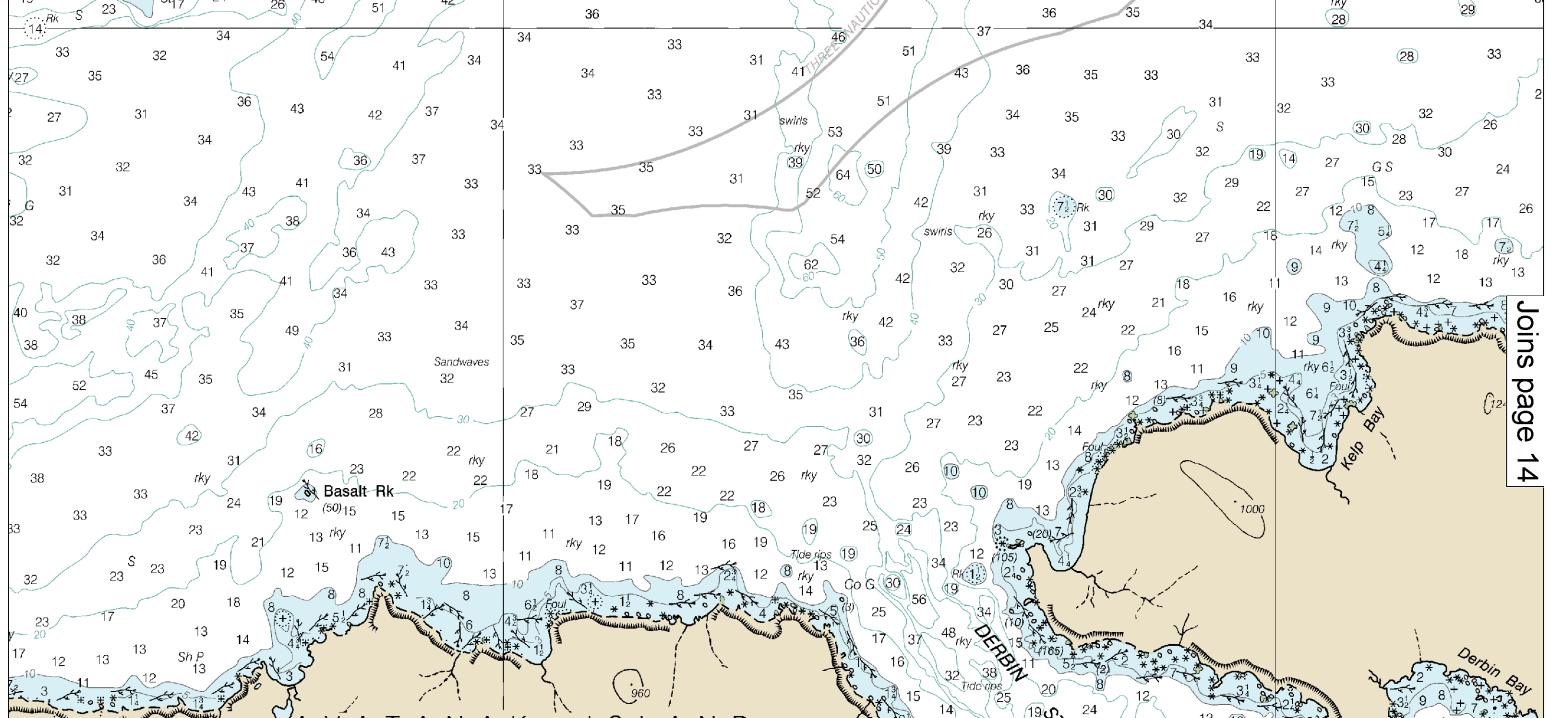
Note: Chart grid lines are aligned with true north.

1 1000 0 2000 4000 6000 8000 10000  
Yards

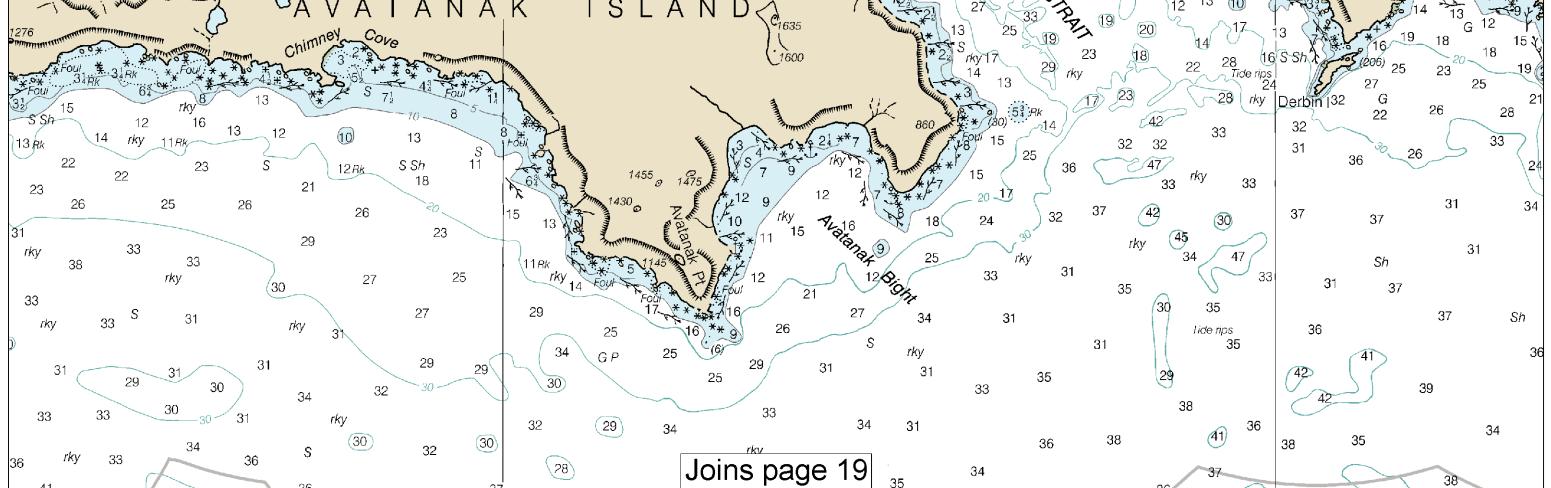
Joins page 7



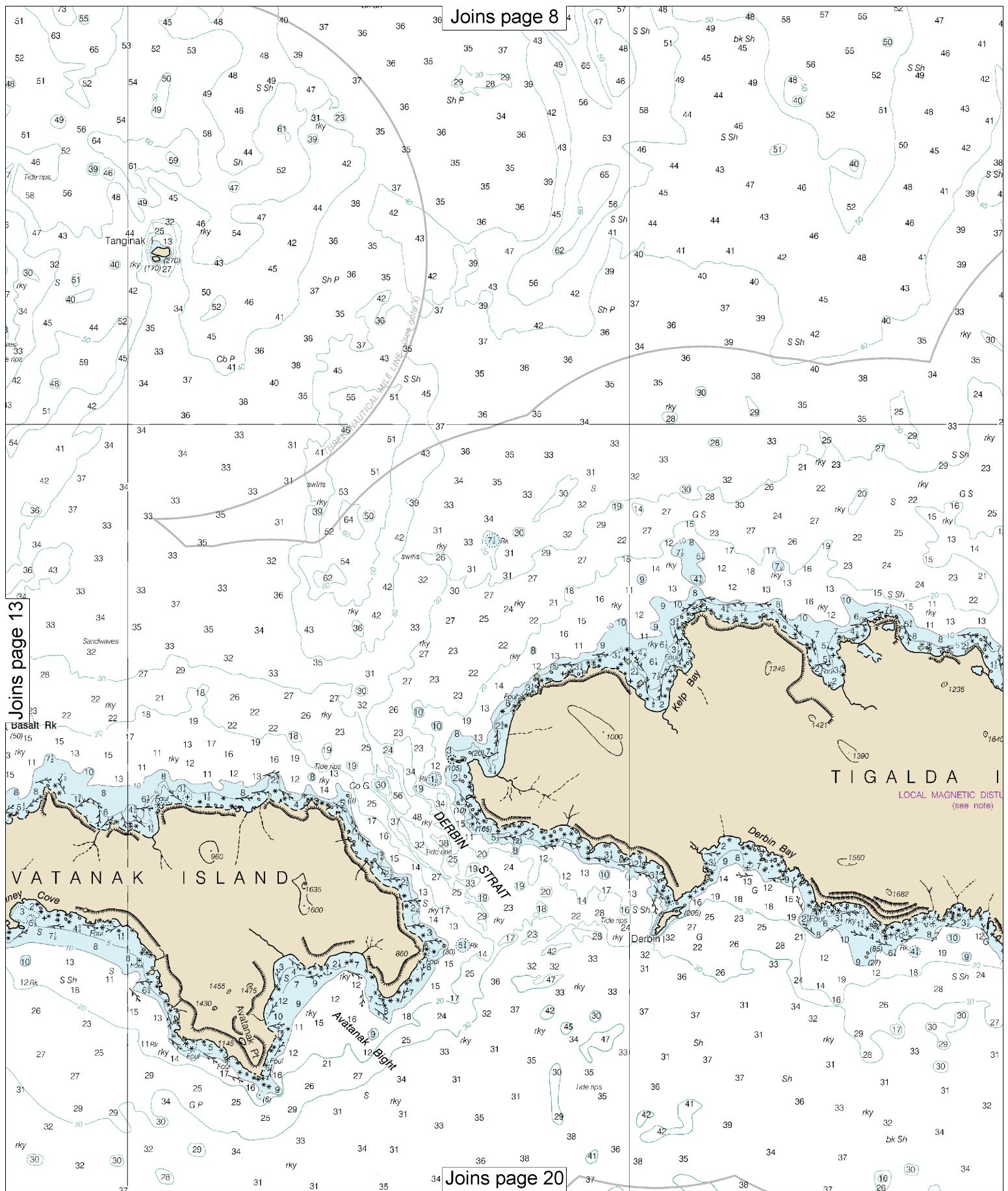
Joins page 14



Joins page 19



Joins page 8



14

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

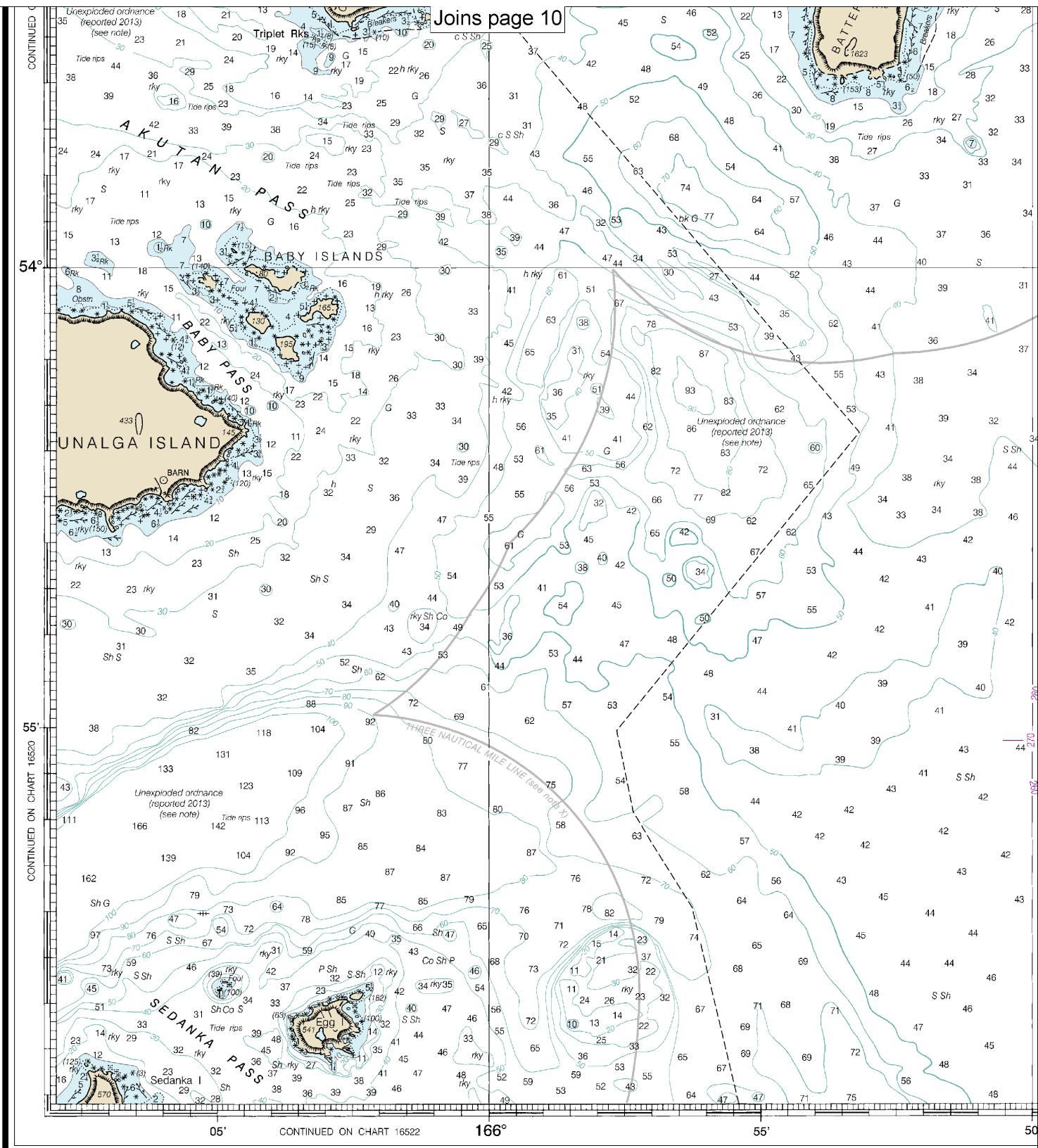
SCALE 1:80,000  
Nautical Miles  
Yards

See Note on page 5.

Joins page 9

4 Joins page 21

15



9th Ed., Dec. 2015

**16531**

Last Correction: 12/2/2015. Cleared through:  
LNM: 4616 (11/15/2016), NM: 4616 (11/12/2016), CHS: 1016 (10/28/2016)

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov).

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at <http://www.nauticalcharts.noaa.gov/staff/contact.html>

**16**

Note: Chart grid  
lines are aligned  
with true north.

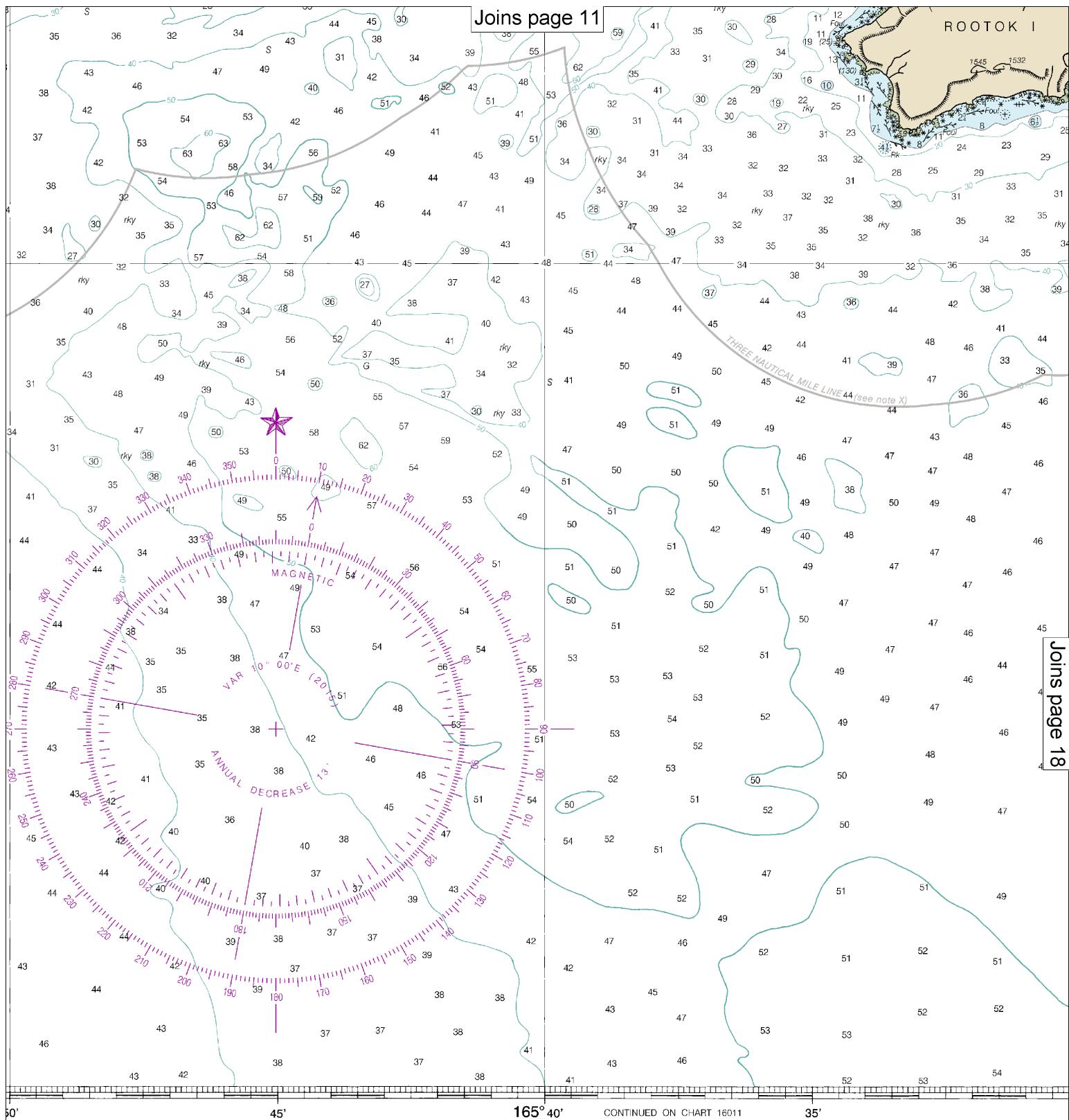
Printed at reduced scale.

SCALE 1:80,000  
Nautical Miles

See Note on page 5.

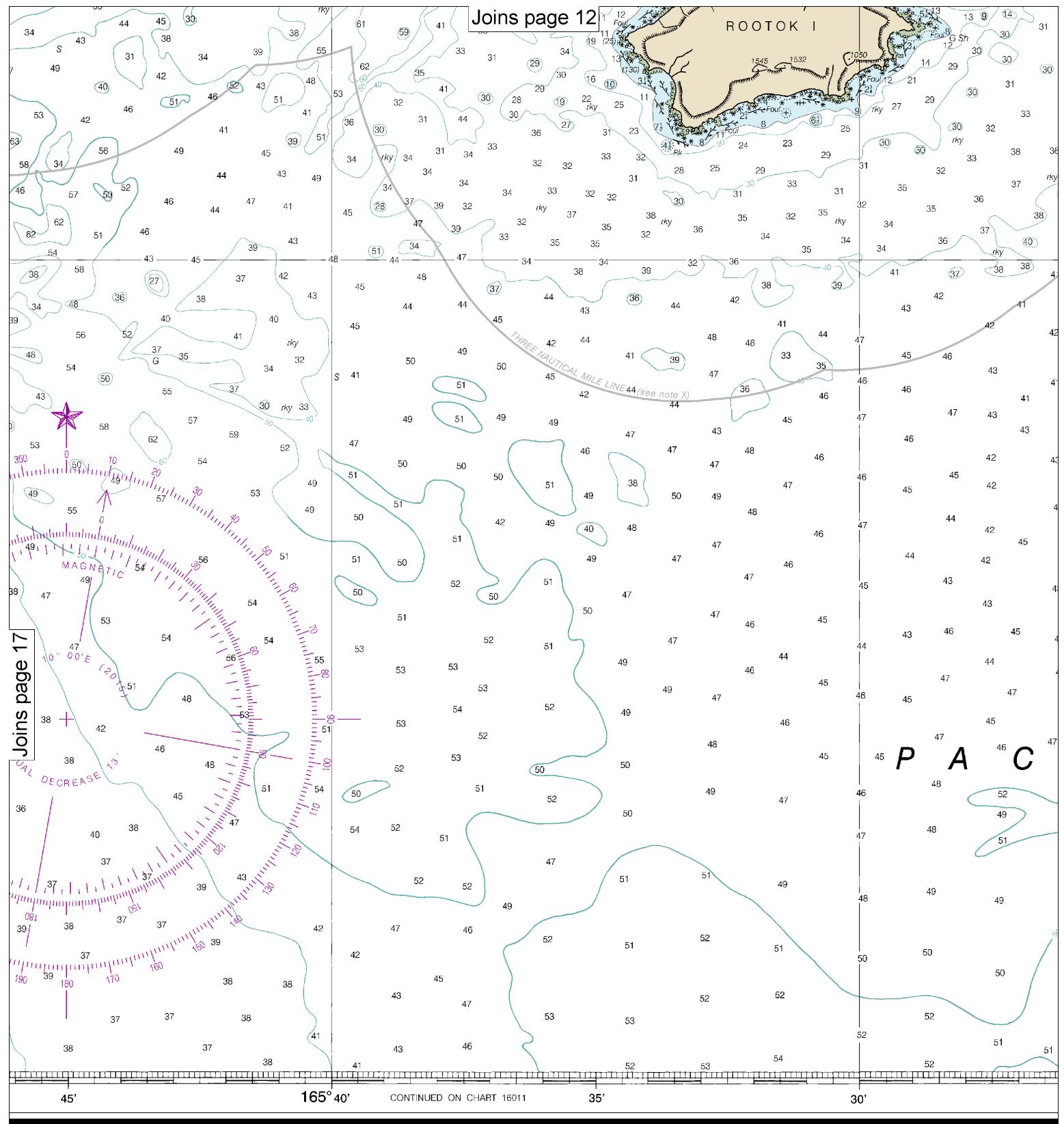


Joins page 11



SOUNDINGS IN FATHOMS

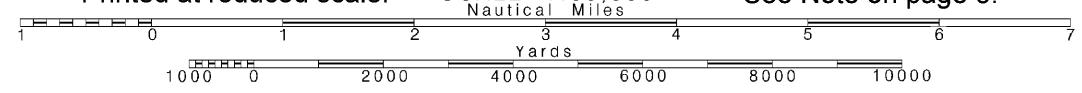
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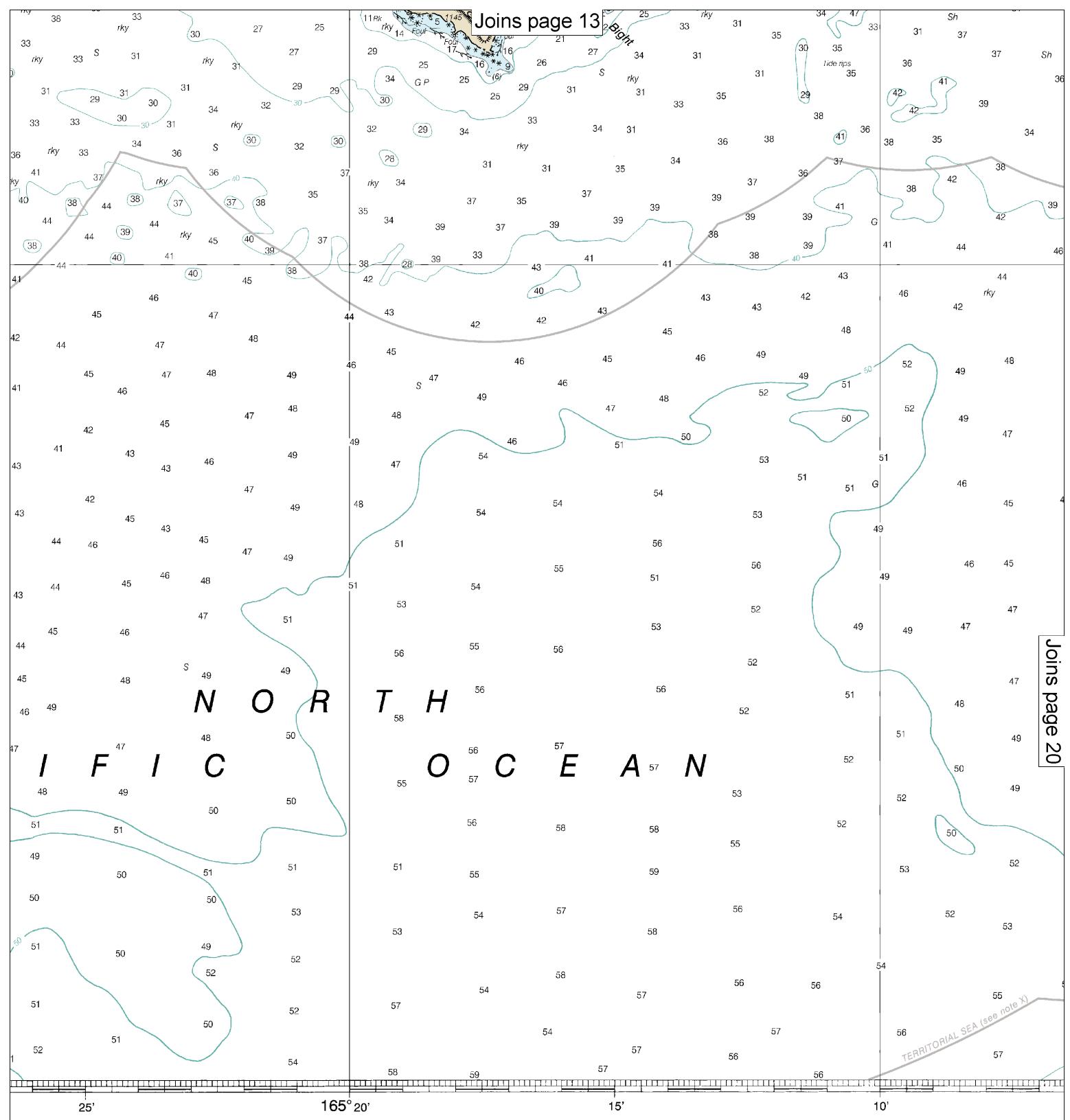


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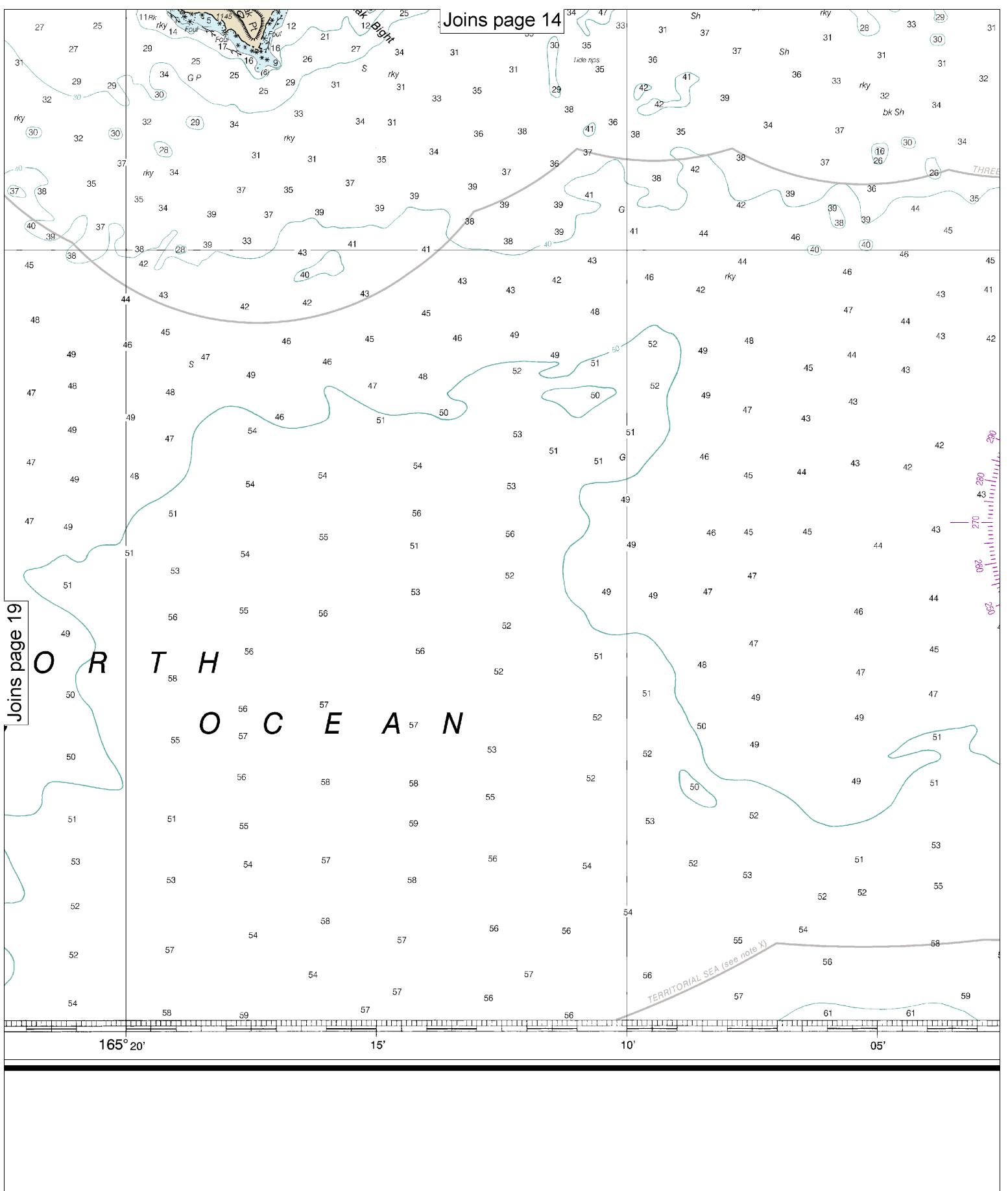
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.





at Washington, D.C.  
 MENT OF COMMERCE  
 ATMOSPHERIC ADMINISTRATION  
 OCEAN SERVICE  
 AST SURVEY



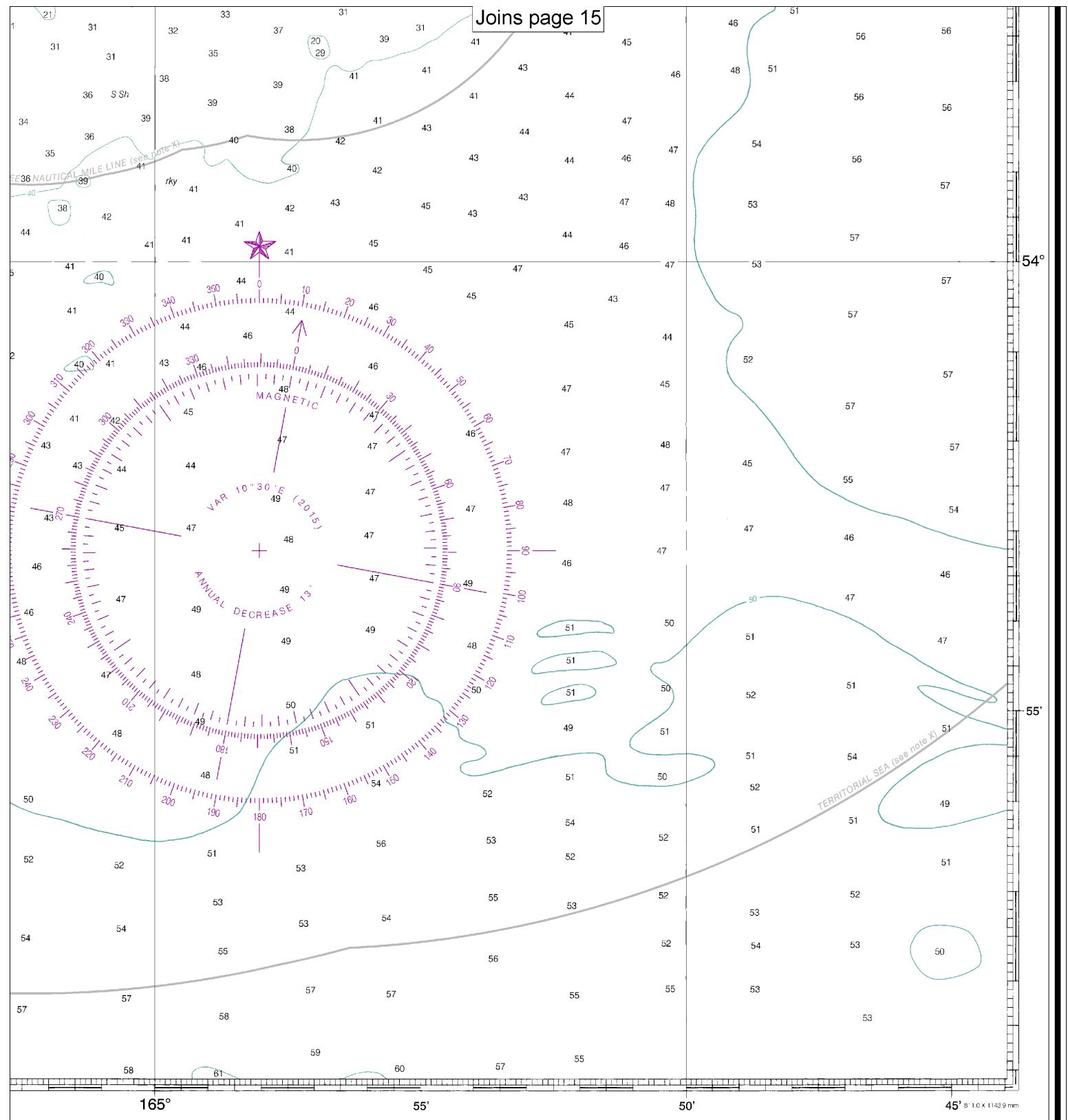
# 20

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:80,000  
Nautical Miles  
Yards  
Meters

See Note on page 5.



FATHOMS	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96
METERS	1	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Krenitzin Islands  
SOUNDINGS IN FATHOMS - SCALE 1:80,000

16531

21



EMERGENCY INFORMATION

## VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16** – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

**Channels 68, 69, 71, 72 and 78A** – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

## Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

**HAVE ALL PERSONS PUT ON LIFE JACKETS!**



**NOAA Weather Radio All Hazards (NWR)** is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

## Quick References

Nautical chart related products and information

— <http://www.nauticalcharts.noaa.gov>

Interactive chart catalog

— <http://www.charts.noaa.gov/InteractiveCatalog/nrnc.shtml>

Report a chart discrepancy

— <http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx>

Chart and chart related inquiries and comments

— <http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs>

Chart updates (LNM and NM corrections)

— [http://www.nauticalcharts.noaa.gov/mcd/updates/LNM\\_NM.html](http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html)

Coast Pilot online

— <http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm>

Tides and Currents

— <http://tidesandcurrents.noaa.gov>

Marine Forecasts

— <http://www.nws.noaa.gov/om/marine/home.htm>

National Data Buoy Center

— <http://www.ndbc.noaa.gov/>

NowCoast web portal for coastal conditions

— <http://www.nowcoast.noaa.gov/>

National Weather Service

— <http://www.weather.gov/>

National Hurricane Center

— <http://www.nhc.noaa.gov/>

Pacific Tsunami Warning Center

— <http://ptwc.weather.gov/>

Contact Us

— <http://www.nauticalcharts.noaa.gov/staff/contact.htm>



For the latest news from Coast Survey, follow @NOAAcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.